

REMARKS

Applicants appreciate the Examiner's thorough consideration provided to the present application. Claims 1-6, 8, 11-13 and 17-25 are currently pending in the instant application. Claims 1, 8, 19 and 21 are independent. Claims 1, 8, 19 and 21 have been amended and claim has been cancelled. Claims 22-26 have been added for the Examiner's consideration. Applicants submit that the subject matter of claims 22-26 is fully supported by the original written description, including, but not limited to FIGs. 4-6(c) and the corresponding discussion in the specification.

Claim Rejections Under 35 U.S.C. § 112

Claim 20 has been rejected due to the presence of alleged informalities with the claims. This rejection is respectfully traversed.

In light of the foregoing amendments to the claims, Applicants respectfully submit that these rejections have been obviated and/or rendered moot. However, Applicants respectfully submit that the foregoing amendments have been made to merely clarify the claimed invention as these alleged informalities should have been merely objected to by the Examiner.

Without conceding the propriety of the Examiner's rejections, but merely to timely advance the prosecution of the application, Applicants have

incorporated the changes recommended by the Examiner. Applicants submit that the requested changes do not appear to either raise a substantial question of the patentability of the claimed invention nor do they narrow the scope of the claimed invention.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-6, 8, 11 and 13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Zimmerman (U.S. Patent No. 1,289,350). Claims 1-4, 6, 8, 11 and 13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Simons (U.S. Patent No. 2,147,719). These rejections are respectfully traversed.

Without conceding the propriety of the Examiner's rejection, but merely to expedite the prosecution of the present application, Applicants have amended claims 1 and 8 to clarify the claimed invention for the benefit of the Examiner. Accordingly, these rejections have been obviated and/or rendered moot. Applicants submit that the prior art of record fails to teach or suggest each and every limitation of the unique combination of limitations of the claimed invention. Accordingly, these rejections should be withdrawn.

For example, with respect to claim 1, the prior art of record fails to teach or suggest the unique combination of limitations of the claimed invention, including the feature(s) of: "at least one fluid slot for permitting fluid

communication between corresponding adjacent smaller heat exchangers, said fluid slots extending normal to said shell side fluid path and in parallel with said tubes, *wherein at least one of said isolation and flow direction control plates includes at least two of said fluid slots.*" (Emphasis added). Accordingly, this rejection should be withdrawn.

With respect to claim 8, the prior art of record fails to teach or suggest the unique combination of limitations of the claimed invention, including the feature(s) of: "creating a plurality of smaller heat exchangers by providing a plurality isolation and flow direction control plates in a shell side of the heat exchanger assembly, wherein each of said isolation and flow direction control plates includes at least one fluid slot for permitting the fluid flow to pass through said isolation and flow direction control plate, said fluid slots extending normal to said shell side fluid path and in parallel with said tubes, *and at least one of said isolation and flow direction control plates includes at least two fluid slots.*" (Emphasis added). Accordingly, this rejection should be withdrawn.

Applicants respectfully submit that it appears that neither the Zimmerman nor the Simons patents include baffle plates with more than one fluid slot. Specifically, even if the baffle plates of Zimmerman (element H) and Simons (elements 15, 24 and 25) were construed as being analogous to the isolation and flow direction control plates of the claimed invention, these baffle

plates clearly only are provided with a single fluid slot, if any. Therefore, these rejections should be withdrawn and the present application should be passed to Issue.

Claim Rejections Under 35 U.S.C. § 103

Claims 6, 8 and 11-13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Zimmerman or Simons. Claims 17-18 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Zimmerman in view of Maniscalco (U.S. Patent No. 1,979,975). Claims 19 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zimmerman in view of Bell, Opitzer, Jenis et al. or La Mori et al.. These rejections are respectfully traversed. Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Harper in view of Bell, Opitzer, Jenis et al. or La Mori et al.

As discussed in greater detail hereinabove, and in light of the foregoing amendments to the claims, Applicants respectfully submit that all of the rejections have been obviated and/or rendered moot. Since the prior art of record fails to teach or suggest each and every element of the independent claims of the present application, the Examiner's rejections under 35 U.S.C. § 103(a) should be withdrawn.

With respect to the Examiner's rejection based upon the Zimmerman or Simons references in view of Maniscalco, Applicants submit that the alleged modification of the prior art of record advanced by the Examiner would not have been obvious to one of ordinary skill in the art. Specifically, Zimmerman and Simons employ fluid slots that are purposefully arranged at one end of a respective baffle plate and with only a single hole or opening on alternating sides of the baffle plates, e.g., as seen in FIGs. 1 and 3 of Simons and FIG. 7 of Zimmerman, the flow through the single openings is purposefully provided to impart a sinusoidal flow through the tube banks. Further, Maniscalco is directed at shell flow in a heat exchanger that is not the same as that in Simons or Zimmerman. Specifically, the "fluid slots" of Maniscalco do not extend normal to the shell side fluid path and in parallel with the tubes as in the claimed invention. Accordingly, Applicants submit that this alleged combination of the prior art of record would not have been obvious to one of ordinary skill in the art.

With respect to claim 19, the prior art of record fails to teach or suggest the unique combination of limitations of the claimed invention, including the feature(s) of: "at least one fluid slot for permitting fluid communication between corresponding adjacent smaller heat exchangers, said fluid slots extending normal to said shell side fluid path and in parallel with said tubes *and wherein at least one of said isolation and flow direction control plates of said heat*

exchanger includes at least two fluid slots.” (Emphasis added). Accordingly, this rejection should be withdrawn.

With respect to claim 21, the prior art of record fails to teach or suggest the unique combination of limitations of the claimed invention, including the feature(s) of: “operatively connecting said heat exchanger assembly to an inlet of a turbine assembly, said at least one fluid slot of said isolation and flow direction control plate positioned adjacent to said inlet of the turbine assembly, *wherein said at least one isolation and flow direction control plate of said heat exchanger includes at least two fluid slots.”* (Emphasis added). Accordingly, this rejection should be withdrawn.

As discussed in greater detail hereinabove, Applicants submit that it would not have been obvious to provide more than one opening in the alleged, analogous baffle plates of Zimmerman or Harper. In addition, as shown in FIGs. 4, 5 and 6(a-c) of the present application, Applicants submit that the additional features of claims 22-25 are both fully supported by the original written description and patentably distinct from the prior art of record.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

Accordingly, reconsideration and withdrawal of the claim rejection are respectfully requested. Moreover, the Applicants respectfully submit that the instant application is in a condition for allowance.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

In the event there are any matters remaining in this application, the Examiner is invited to contact Matthew T. Shanley, Registration No. 47,074 at (703) 205-8000 in the Washington, D.C. area.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants respectfully petition for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$110.00 is attached hereto.

Amendment dated July 9, 2004
Reply to Office Action of March 9, 2004

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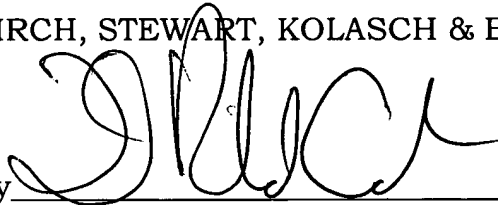
response in connection with the present application and the required fee of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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